



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E. Suite 400
Aberdeen, South Dakota 57401



IN REPLY REFER TO:
DESCRM
MC-208

MAR 08 2012

MEMORANDUM

TO: Superintendent, Fort Berthold Agency

FROM: ^{ACTING} Regional Director, Great Plains Region

SUBJECT: Supplemental to Environmental Assessment

A Categorical Exclusion has been completed in compliance with the regulations of the National Environmental Policy Act (NEPA) of 1969, as amended. The proposed Supplemental Categorical Exclusion is for information tiering off of an existing Environmental Assessment for Arrow Pipeline, to reroute a portion of Arrow-KOG Skunk Creek #13-18-17-16H pipeline system.

All the necessary requirements of the National Environmental Policy Act have been completed. Attached for your files is a copy of the Categorical Exclusion.

If you have any questions, please call Marilyn Bercier, Regional Environmental Scientist, Division of Environment, Safety and Cultural Resources Management, at (605) 226-7656.

Attachment

cc: Tex Hall, Three Affiliated Tribes (with attachment)
Elgin Crows Breast, THPO (with attachment)
Derek Enderud, BLM, Dickinson, ND (with attachment)
Mike Cook, SWCA (with attachment)
Jeffrey Hunt, Fort Berthold Agency



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E.
Aberdeen, South Dakota 57401



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EXCEPTION CHECKLIST FOR BIA CATEGORICAL EXCLUSIONS

Project: Arrow -KOG Skunk Creek #13-18-17-16H Pipeline Reroute Date: 3/7/2012

Nature of Proposed Action: Arrow Pipeline, LLC (Arrow) proposes to reroute a portion of the Arrow-KOG Skunk Creek #13-18-17-16H pipeline system. The reroute would occur exclusively within a previously analyzed and approved corridor. The reroute would allow Arrow to transport oil, natural gas liquids, and produced water from the KOG Skunk Creek #13-18-17-16H well to market and approved disposal facilities. Disturbance would occur within a 40-foot-wide construction right-of-way but would remain wholly within an area which has been previously analyzed under NEPA and in which the same action was found to have no significant impact. The FONSI for original alignment and associated corridor was issued on January 25, 2012. This document is tiered to Environmental Assessment and Finding of No Significant Impact: Arrow Pipeline, LLC. Authorize Land Use for Pipelines Connecting the KOG Skunk Creek 13-18-17-16H and 13-18-17-16H3 Wells to the Existing Arrow Phase 2 Southeast Pipeline (January 2012).

Exclusion category and number: 516 DM 10.5 F (1) Rights-of-Way

Evaluation of Exceptions to use of Categorical Exclusion:

1. This action would have significant adverse effects on public health or safety. No X Yes _____
2. This action would have an adverse effect on unique geographical features, such as wetlands, wild or scenic rivers, refuges, floodplains, rivers placed on nationwide river inventory, or prime or unique farmlands. No X Yes _____
3. The action will have highly controversial environmental effects. No X Yes _____
4. The action will have highly uncertain environmental effects or involve unique or unknown environmental risks. No X Yes _____
5. This action will establish a precedent for future actions. No X Yes _____
6. This action is related to other actions with individually insignificant, but cumulatively significant environmental effects. No X Yes _____
7. This action will affect properties listed or eligible for listing in the National Register

Fort Berthold

Arrow - KOG Skunk Creek #13-18-17-16H Pipeline Reroute
of Historic Places.

No X Yes _____

8. This action will affect a species listed, or proposed to be listed as endangered or threatened.

No X Yes _____

9. This action threatens to violate federal, state, local or tribal law or requirements imposed for protection of the environment.

No X Yes _____

10. This action will have a disproportionately high and adverse effect on low income or minority populations.

No X Yes _____

11. This action will limit access to, and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners, or significantly adversely affect the physical integrity of such sacred sites.

No X Yes _____

12. This action will contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area, or may promote the introduction, growth, or expansion of the range of such species.

No X Yes _____

A "yes" to any of the above exceptions will require that an EA be prepared.

NEPA Action - - - CE X EA _____

Preparer's Name and Title: Jeffrey Davis, Environmental Protection Specialist

Regional Archeologist Concurrence with Item 7 Charles H. Hendrix

Concur: Jeffrey R. Davis Date: 3-7-2012
Regional Office/Agency Environmental Coordinator

Concur: Jim Laybrite Date: 3-8-12
ACTING Regional Director/Superintendent

Categorical Exclusion with Pertinent Analysis Documentation

United States Bureau of Indian Affairs

**Great Plains Regional Office
Aberdeen, South Dakota**



Arrow Pipeline, LLC

**Categorical Exclusion to Authorize Land Use for the Reroute of the Arrow KOG Skunk
Creek 13-18-17-16H Pipelines**

Fort Berthold Indian Reservation

March 2012

For information contact:
Bureau of Indian Affairs, Great Plains Regional Office
Division of Environment, Safety and Cultural Resources Management
115 4th Avenue SE, Aberdeen, South Dakota 57401
(605) 226-7656

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Appendix

A Plats, Drawings, and Diagrams for the Proposed Skunk Creek 13-18-17-16H Pipelines

1. Purpose and Need for the Proposed Action

The purpose of the proposed action is to authorize the land use by Arrow Pipeline, LLC (Arrow) for the construction and installation of a reroute to the approved, but incomplete, KOG Skunk Creek 13-18-17-16H pipelines (reroute). The reroute of the proposed pipelines would be located entirely within the previously analyzed and approved right-of-way (ROW) of the KOG Skunk Creek 13-18-17-16H pipelines and would transport oil, natural gas liquids, and produced water to markets and approved disposal sites.

Developments have been proposed on land held in trust by the United States in Dunn County, North Dakota. The Bureau of Indian Affairs (BIA) is the surface management agency for potentially affected tribal lands and individual allotments. The economic development of available resources and associated BIA actions are consistent with the BIA's general mission. Leasing and development of mineral resources offer substantial economic benefits to the Three Affiliated Tribes of the Mandan, Hidatsa, and Arikara Nations and to individual tribal members.

2. Authorities

Oil and gas exploration and development activities are conducted under authority of the Indian Mineral Leasing Act of 1938 (25 United States Code [USC] 396a, et seq.), the Indian Mineral Development Act of 1982 (25 USC 2101, et seq.), and the Energy Policy Act of 2005 (42 USC 15801, et seq.).

3. Legal Land Description for Proposed Action

The reroute would be located on trust land originating from the approved KOG Skunk Creek pipelines, at a point in the NW¼ SW¼ of Section 24, Township (T) 148 North (N), Range (R) 93 West (W), 5th Prime Meridian (P.M.), Dunn County, North Dakota, and terminating at the Arrow Phase 2 Southeast Pipeline in the SE¼, NE¼ of Section 23, T148N, R93W, 5th P.M., Dunn County, North Dakota, approximately 11.5 miles southeast of Mandaree, North Dakota (Figure 1).

*Categorical Exclusion to Authorize Land Use for the Reroute of the Arrow KOG Skunk Creek 13-18-17-16H Pipelines
(March 2012)*

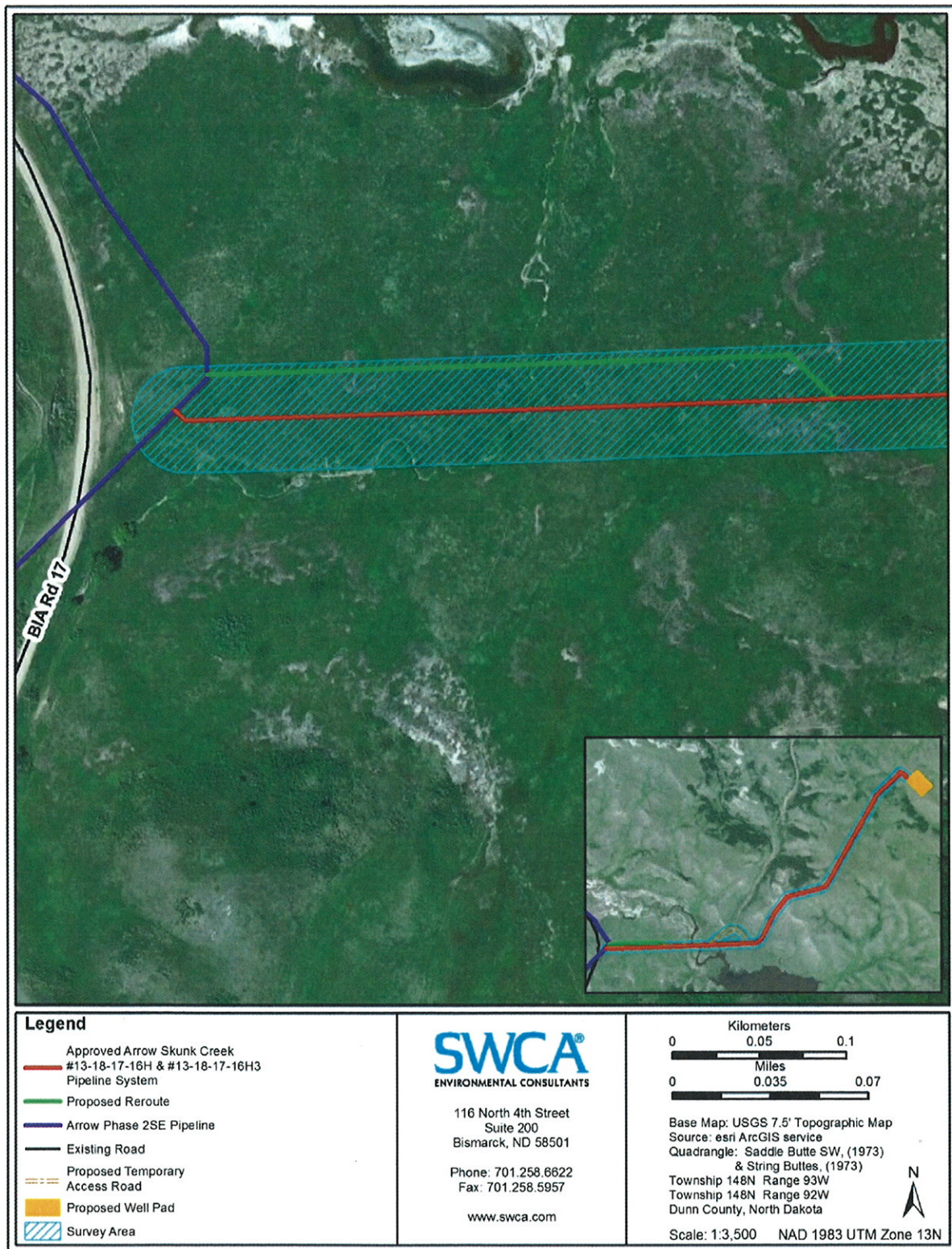


Figure 1. Map of the proposed KOG Skunk Creek 13-18-17-16H Pipelines Reroute.

4. Materials Information and Corrosion Rates

Steel Pipe

Arrow proposes to construct the oil and gas pipelines, including the reroute, using new steel pipe rated by the American Petroleum Institute (API) as 5L X52. Arrow would ensure that each steel pipe segment is coated with approximately 14 to 16 millimeters of fusion bonded epoxy coating. Further, Arrow would deploy an active cathodic protection system for all steel pipe, which further reduces the likelihood of external corrosion. Arrow would ensure that each steel pipe segment is allotted a 1/16-inch corrosion allowance; however, because of the non-corrosive nature of Bakken crude and the low concentrations of hydrogen sulfide, Arrow does not anticipate any external or internal corrosion during the operating lifetime of the pipe, which, at a minimum, is estimated to be 50 years.

Fiberspar[®] or Similar Pipe

Arrow proposes to construct the produced water pipeline, including the reroute, using a material known as Fiberspar or one with the same corrosion-resistant characteristics as Fiberspar. This type of material is not subject to internal or external corrosion.

5. Pipeline Marking Procedures

Arrow adheres to the requirements of Title 49 Code of Federal Regulations (CFR) Part 192.707 with regard to the marking of buried pipelines. Specifically, Arrow would place pipeline markers within 1,000 feet of one another, at all public road crossings, railroad crossings, creek crossings, fence crossings, and at all points of major direction change.

6. Quality Control/Quality Assurance Measures

Arrow purchases steel pipe that is rated as API 5L X52 and inspects all pipe while at the mill to ensure quality. Arrow is also present to ensure that external epoxy coating is applied to a minimum thickness of 14 millimeters. During construction, all welds are visually inspected for quality and completeness by qualified professionals. Once welds have passed visual inspection, they are subjected to 100 percent non-destructive testing. After passing these tests, the weld areas are covered for corrosion protection. After the weld areas have been covered, the external coating of the pipe is inspected using a jeepmeter to detect holes and cracks. The pipe is lowered into the trench and buried. Prior to being put into service, the steel pipe is hydrotested to approximately 1.5 times the minimum design pressure of 1,180 pounds per square inch gauge.

7. Valve Locations

Two valves would be installed at each end of the proposed pipeline. One valve would be installed at the well location while the second valve would be installed at the proposed tie-in. The installation of two valves would allow Arrow to isolate the proposed pipeline if required.

8. Reclamation

Interim Reclamation

Reclamation would continue to occur over the life of the pipeline. Initial reclamation would be required after initial construction and then following any maintenance work or additions of infrastructure. Reclamation would be required before final abandonment of the decommissioned pipeline. Successful reclamation would at all times be the responsibility of the system's operator.

Trenches would be back-filled immediately after the pipe is installed and testing is complete, assuming frozen or saturated soils are not present. Back-fill piles would be stored opposite of the topsoil piles during construction. If construction occurs during winter, Arrow would partially fill the trench with useable, non-frozen, back-fill soil to the extent possible and cover the entire ROW including the trench with straw. The trench would be back-filled and topsoil distributed as soon as practicable after the soil has defrosted. Topsoil piles would be covered to eliminate the potential for rill erosion and subsequent loss of soil during spring snow melt and precipitation events.

Applicable short- and long-term best management practices would be used to minimize and control erosion in disturbed areas. To reduce compaction, the ROW would be plowed before the stockpiled topsoil is distributed.

The disturbed areas would be reclaimed and contoured as soon as possible after construction is complete (fall/spring). The ROW would be covered with stockpiled topsoil and seeded with a seed mixture determined by the BIA. Arrow would control noxious weeds within the ROW and other applicable facilities by approved chemical or mechanical methods. If seeding of the ROW does not occur due to growing season constraints, Arrow would deploy approved weed-free hay across the entire ROW. The presence of hay across the ROW would reduce the potential for excessive erosion as a result of spring snow melt and precipitation.

The entire ROW would be monitored for erosion, subsidence, and noxious weeds. In areas where problems are found to occur, reclamation efforts would continue until the BIA feels the ROW is successfully reclaimed. Reclamation is considered successful when:

- seeded areas are established;
- adjacent vegetative communities spread back into the disturbed areas; and
- noxious weeds are under control.

If after two growing seasons the new seeding is not successful, the BIA may require additional efforts to establish vegetation. The BIA has developed a weed management plan to treat known or likely to occur noxious weed species.

Final Reclamation

Final reclamation would occur when the pipeline is decommissioned. All disturbed areas would be reclaimed, reflecting the BIA's view of oil and gas exploration and production as temporary intrusions on the landscape. All facilities would be removed; however it is economically and environmentally unfeasible to excavate and remove the decommissioned pipelines. Instead, the pipelines would be purged with water of any natural gas remaining in the lines and abandoned in place.

9. Applicable NEPA Document(s)

Environmental Assessment and Finding of No Significant Impact: Arrow Pipeline, LLC. Authorize Land Use for Pipelines Connecting the KOG Skunk Creek 13-18-17-16H and 13-18-17-16H3 Wells to the Existing Arrow Phase 2 Southeast Pipeline (January 2012).

10. NEPA Adequacy Criteria

This document has identified the above-mentioned previously prepared NEPA document, which adequately describes the environmental consequences of the newly proposed action described herein and meets the following NEPA Adequacy Criteria.

1. The proposed action is substantially the same action and at the site specifically analyzed in the existing NEPA document.
2. The range of alternatives is reasonable with respect to the current proposed action in the existing NEPA document, which appropriately considers and analyzes current environmental concerns, interests, and resource values.
3. The existing analysis and conclusions are adequate in the existing NEPA document. The analysis is still valid in light of new studies or resource assessment information.
4. The methodology and analytical approach used in the existing NEPA document continues to be appropriate for the proposed action.
5. The direct and indirect impacts of the proposed action are unchanged from those identified in the existing NEPA document.
6. The cumulative impacts that would result from implementation of the proposed action are unchanged from those analyzed in the existing NEPA document.
7. A 30-day comment period involving public input and interagency review was used in the development of the existing NEPA document.

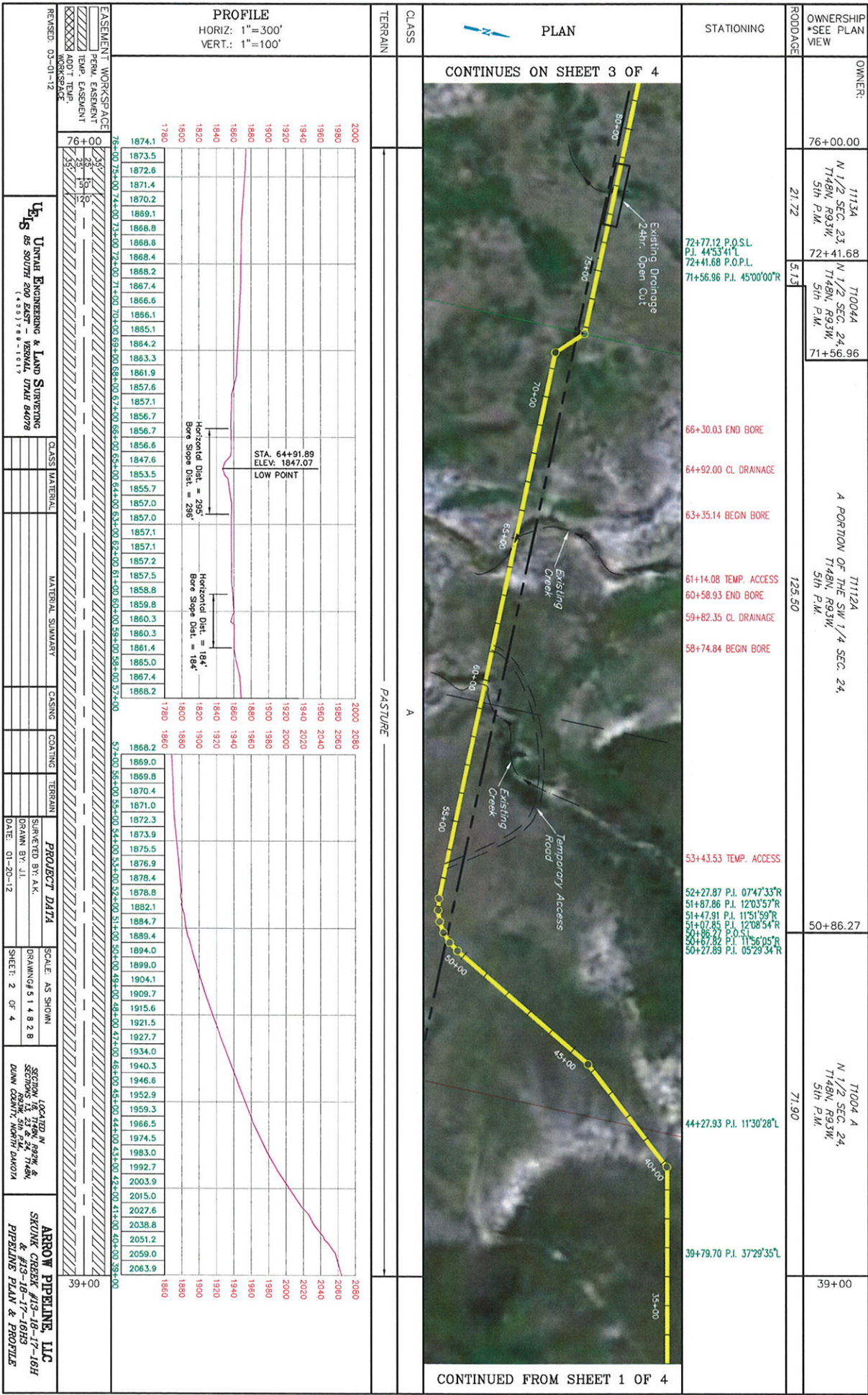
APPENDIX A
Plats, Drawings, and Diagrams for the
Arrow KOG Skunk Creek 13-18-17-16H Pipelines

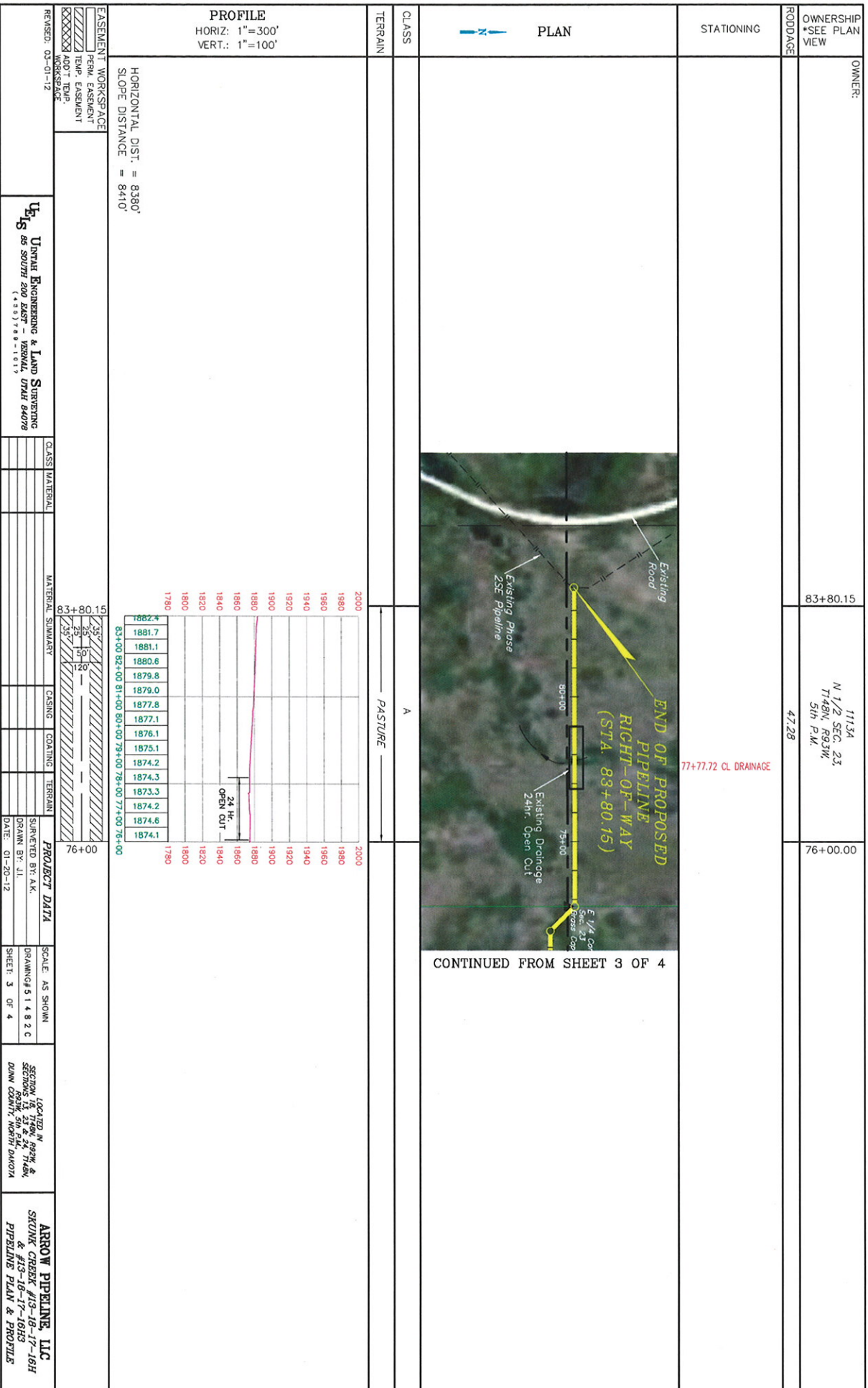
Categorical Exclusion

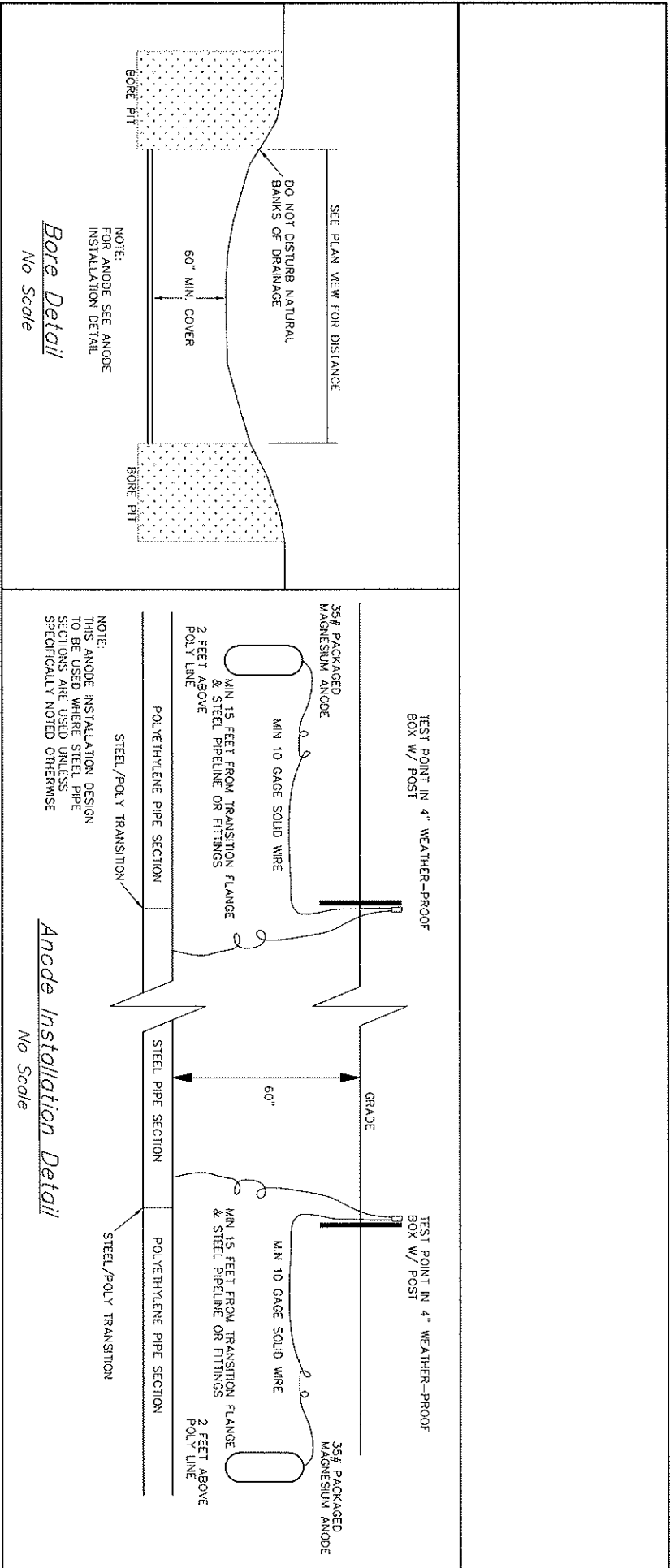
Fort Berthold

Arrow --KOG Skunk Creek #13-18-17-16H Pipeline Reroute

Page 2







U.S. Utility Engineering & Land Surveying 88 SOUTH 2900 EAST SARASOTA, FL 34237 (407) 766-1917		PROJECT DATA		LOCATED IN		ARROW PIPELINE, LLC	
SURVEYED BY: A.K.		SCALE: AS SHOWN		SECTION 17, T29S, R17E, S4M		SKUNK CREEK #13-18-17-18H	
DRAWN BY: J.L.		DRAWING# 514820		SECTION 17, T29S, R17E, S4M		& #13-18-17-18H	
DATE: 01-20-12		SHEET: 4 OF 4		DAWSON COUNTY, NORTH DAKOTA		PIPELINE PLAN & PROFILE	

Sec. 13

PIPELINE RIGHT-OF-WAY DESCRIPTION

A 50' WIDE RIGHT-OF-WAY 25' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN LOT 4 OF SECTION 18, T148N, R92W, 5th P.M., WHICH BEARS N09°46'25"E 752.66' FROM THE SOUTHWEST CORNER OF SAID SECTION 18, THENCE N41°03'24"W 71.77'; THENCE N54°01'18"W 79.95'; THENCE N65°52'18"W 18.89' TO A POINT ON THE WEST LINE OF LOT 4 OF SAID SECTION 18, WHICH BEARS N00°05'17"W 850.55' FROM THE SOUTHWEST CORNER OF SAID SECTION 18, THENCE N65°52'18"W 21.08'; THENCE S24°03'52"W 39.97'; THENCE N65°52'18"W 40.02'; THENCE S48°56'30"W 619.75'; THENCE S34°59'19"W 40.02'; THENCE S30°55'31"W 409.88' TO A POINT ON THE SOUTH LINE OF THE SE 1/4 OF SECTION 13, T148N, R93W, 5th P.M., WHICH BEARS S89°54'45"W 761.31' FROM THE SOUTHEAST CORNER OF SAID SECTION 13, THENCE S30°55'31"W 1726.99'; THENCE S41°54'00"W 40.01'; THENCE S54°05'28"W 39.97'; THENCE S65°54'35"W 40.08'; THENCE S77°30'16"W 791.31'; THENCE S40°00'41"W 448.22'; THENCE S28°30'13"W 599.96'; THENCE S33°59'47"W 39.94'; THENCE S45°55'52"W 18.45' TO A POINT ON THE SOUTH LINE OF THE SE 1/4 NW 1/4 OF SECTION 24, T148N, R93W, 5th P.M., WHICH BEARS N89°56'13"E 2140.97' FROM THE WEST 1/4 CORNER OF SAID SECTION 24, THENCE S45°55'52"W 21.58'; THENCE S58°04'46"W 40.06'; THENCE S69°56'45"W 39.95'; THENCE S82°00'42"W 40.01'; THENCE S89°48'15"W 1929.09'; THENCE N45°11'45"W 84.72' TO A POINT ON THE NORTH LINE OF THE NW 1/4 SW 1/4 OF SAID SECTION 24 WHICH BEARS N89°56'37"E 25.12' FROM THE WEST 1/4 CORNER OF SAID SECTION 24, THENCE N45°11'45"W 35.44' TO A POINT ON THE WEST LINE OF THE SW 1/4 NW 1/4 OF SAID SECTION 24 WHICH BEARS N00°03'13"W 25.00' FROM THE WEST 1/4 CORNER OF SAID SECTION 24, THENCE S89°54'34"W 1103.03' TO A POINT IN THE SE 1/4 NE 1/4 OF SECTION 23, T148N, R93W, 5th P.M., WHICH BEARS N88°47'33"W 1103.30' FROM THE EAST 1/4 CORNER OF SAID SECTION 23, THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES, BASIS OF BEARINGS IS A G.P.S. OBSERVATION, CONTAINS 9.619 ACRES MORE OR LESS.

SW 1/4

S89°56'25"W
2638.09' (Meas.)
NW Cor. Sec. 24
Brass Cap

1/4 Section Line

NW 1/4

CONTINUES ON SHEET 2 OF 2

Sec. 24

T10044

T10044

1/16 Section Line

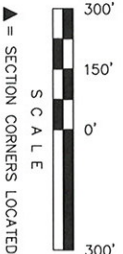
1/16 Section Line

NE 1/4

SE 1/4

TRUE NORTH

2238-B



SCALE

▲ = SECTION CORNERS LOCATED.

BEGINNING OF PROPOSED
PIPELINE RIGHT-OF-WAY
STA. 0+00
(At Edge of Well Pad)

S89°54'45"W - 2632.52' (Meas.)

R 93
R 92

Section Line

T10044

BEGINNING OF PIPELINE STA. 0+00 BEARS N09°46'25"E 752.66' FROM THE SOUTHWEST CORNER OF SECTION 18, T148N, R92W, 5th P.M.

P.O.S.L. 1+70.61 BEARS N00°05'17"W 850.55' FROM THE SOUTHWEST CORNER OF SECTION 18, T148N, R92W, 5th P.M.
P.O.S.L. 13+41.34 BEARS S89°54'45"W 761.31' FROM THE SOUTHEAST CORNER OF SECTION 13, T148N, R93W, 5th P.M.

RIGHT-OF-WAY LENGTHS

PROPERTY OWNER	FEET	ACRES	RODS
12045	170.61	0.196	10.34
2238-B	1170.73	1.344	70.95
T10044	3780.37	4.339	229.11
T1112A	1155.41	2.474	130.63
1113A	1103.03	1.266	66.85
TOTAL	8380.15	9.619	507.89

HORIZONTAL DIST. = 8380'
SLOPE DISTANCE = 8410'

ARROW PIPELINE, LLC

PIPELINE RIGHT-OF-WAY
ON TRIBAL LANDS

(For SKUNK CREEK
#13-18-17-16H &
#13-18-17-16H3)

LOCATED IN

SECTION 18, T148N, R92W &
SECTIONS 13, 23 & 24, T148N, R93W, 5th P.M.,
DUNN COUNTY, NORTH DAKOTA

Sec. 18
SW 1/4
T2045
Lot 4

PROPOSED WELL PAD
SKUNK CREEK
#13-18-17-16H &
#13-18-17-16H3

N00°05'17"W
2632.84' (Meas.)

S89°56'13"E - 5078.04' (G.L.O.)

LINE TABLE

LINE	DIRECTION	LENGTH
L1	N41°03'24"W	71.77'
L2	N54°01'18"W	79.95'
L3	N65°52'18"W	18.89'
L4	N65°52'18"W	21.08'
L5	S24°03'52"W	39.97'
L6	S36°02'01"W	40.02'
L7	S48°56'30"W	619.75'
L8	S34°59'19"W	40.02'
L9	S30°55'31"W	409.88'
L10	S30°55'31"W	1726.99'
L11	S41°54'00"W	40.01'
L12	S54°05'28"W	39.97'
L13	S65°54'35"W	40.08'
L14	S77°30'16"W	791.31'
L15	S40°00'41"W	448.22'
L16	S28°30'13"W	599.96'

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



REV: 03-01-12 J.L.
REV: 01-23-12 J.L.

SHEET 1 OF 2

UNTAH ENGINEERING & LAND SURVEYING
85 SOUTH - 200 EAST • (435) 789-1017
VERNAL, UTAH - 84078

SCALE	DATE
1" = 300'	10-26-11
PARTY	REFERENCES
A.K. S.B.	G.L.O. PLAT
WEATHER	FILE
COLD	5 1 2 0 7 - A

ARROW PIPELINE, LLC

PIPELINE RIGHT-OF-WAY ON TRIBAL LANDS

(For SKUNK CREEK
#13-18-17-16H &
#13-18-17-16H3)

LOCATED IN
SECTION 18, T148N, R92W &
SECTIONS 13, 23 & 24, T148N, R93W, 5th P.M.,
DUNN COUNTY, NORTH DAKOTA



SCALE
▲ = SECTION CORNERS LOCATED.

CONTINUED FROM SHEET 1 OF 2

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS WORK
PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION AND IS
TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Troy Jensen
REGISTERED LAND SURVEYOR
1874654
STATE OF NORTH DAKOTA

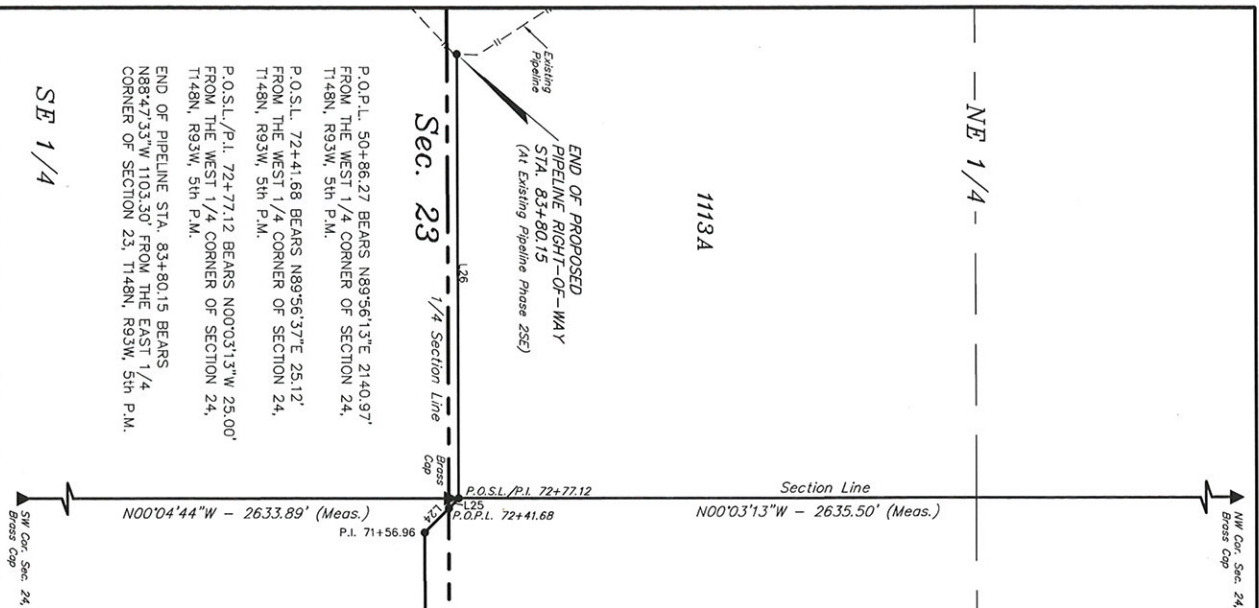
REV: 03-01-12 J.L.
REV: 01-23-12 J.L.

SHEET 2 OF 2

UNITAH ENGINEERING & LAND SURVEYING
85 SOUTH - 200 EAST • (435) 789-1017
VERNAL, UTAH - 84078

SCALE	DATE
1" = 300'	10-26-11
PARTY	REFERENCES
A.K. S.B.	G.L.O. PLAT
WEATHER	FILE
COLD	5 1 2 0 7 - B

LINE	DIRECTION	LENGTH
L15	S40°00'41"W	448.22'
L16	S28°30'13"W	599.96'
L17	S33°59'47"W	39.94'
L18	S45°55'52"W	18.45'
L19	S45°55'52"W	21.58'
L20	S56°04'46"W	40.06'
L21	S69°56'45"W	39.95'
L22	S82°00'42"W	40.01'
L23	S89°48'15"W	1929.09'
L24	N45°11'45"W	84.72'
L25	N45°11'45"W	35.44'
L26	S89°54'34"W	1103.03'



SE 1/4

SW 1/4

T1112A

T1112A

T1004A

T1004A

ARROW PIPELINE, LLC
SKUNK CREEK #13-18-17-16H & #13-18-17-16H3
PIPELINE RIGHT-OF-WAY
SECTION 18, T148N, R92W, &
SECTIONS 13, 23 & 24, T148N, R93W, 5th P.M.

TOTAL PIPELINE RIGHT-OF-WAY ON TRIBAL LANDS

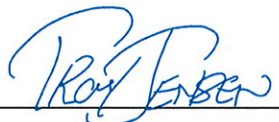
TOTAL LENGTH OF RIGHT-OF-WAY IS 8380.15' OR 1.587 MILES. WIDTH OF RIGHT-OF-WAY IS 50' (25' PERPENDICULAR ON EACH SIDE OF THE CENTERLINE). CONTAINS 9.619 ACRES MORE OR LESS.

ENGINEER'S AFFIDAVIT

STATE OF MONTANA }
COUNTY OF RICHLAND } SS

TROY JENSEN, BEING FIRST DULY SWORN DEPOSES AND STATES THAT HE IS THE REGISTERED LAND SURVEYOR, FOR ARROW PIPELINE, LLC, THAT THESE SURVEYS WERE MADE BY HIM (OR UNDER HIS SUPERVISION): THAT HE HAS EXAMINED THE FIELD NOTES OF THE SURVEYS OF THE PIPELINE RIGHT-OF-WAY AS DESCRIBED AND SHOWN ON THIS MAP, THAT THIS MAP WAS PREPARED UNDER HIS DIRECTION FROM SAID FIELD NOTES; AND THAT SAID RIGHT-OF-WAY, 1.587 MILES IN LENGTH BEGINNING AND ENDING AS SHOWN ON THIS MAP IS ACCURATELY REPRESENTED.



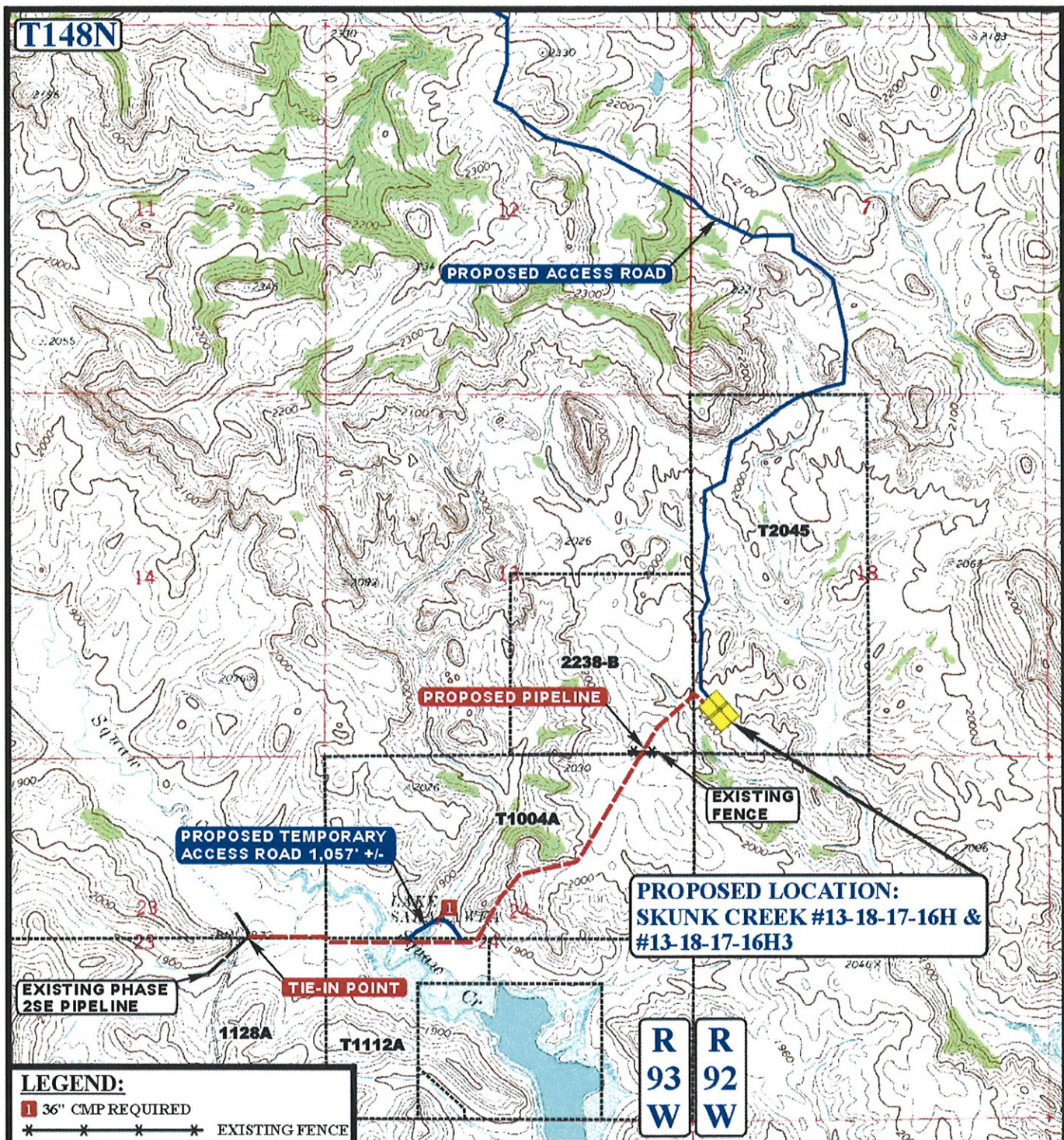

REGISTERED LAND SURVEYOR
REGISTRATION NO. 4654
STATE OF NORTH DAKOTA

APPLICANT'S CERTIFICATE

I, JOHN M. DOLAN, DO HEREBY CERTIFY THAT I AM THE V.P. OF ENGINEERING FOR ARROW PIPELINE, LLC, HEREINAFTER DESIGNATED THE APPLICANT; THAT TROY JENSEN WHO SUBSCRIBED TO THE FOREGOING AFFIDAVIT, IS EMPLOYED BY THE APPLICANT AS A LAND SURVEYOR AND THAT HE WAS DIRECTED BY THE APPLICANT TO SURVEY THE LOCATION OF THIS PIPELINE RIGHT-OF-WAY, 1.587 MILES IN LENGTH BEGINNING AT STA. 0+00 AND ENDING AT STA. 83+80.15, THAT SAID PIPELINE RIGHT-OF-WAY IS ACCURATELY REPRESENTED ON THIS MAP; THAT SUCH SURVEY AS REPRESENTED ON THIS MAP HAS BEEN ADOPTED BY THE APPLICANT AS THE DEFINITE LOCATION OF THE RIGHT-OF-WAY THEREBY SHOWN; AND THAT THE MAP HAS BEEN PREPARED TO BE FILED WITH THE SECRETARY OF THE INTERIOR OR HIS DULY AUTHORIZED REPRESENTATIVE AS PART OF THE APPLICATION FOR SAID RIGHT-OF-WAY TO BE GRANTED THE APPLICANT, ITS SUCCESSORS AND ASSIGNS, WITH THE RIGHT TO CONSTRUCT, MAINTAIN, AND REPAIR IMPROVEMENTS, THEREON AND THEREOVER, FOR SUCH PURPOSES, AND WITH THE FURTHER RIGHT IN THE APPLICANT, ITS SUCCESSORS AND ASSIGNS TO TRANSFER THIS RIGHT-OF-WAY BY ASSIGNMENT, GRANT, OR OTHERWISE.

APPLICANT

V.P. OF ENGINEERING
TITLE



APPROXIMATE TOTAL PIPELINE DISTANCE = 8,380' +/-

LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE
- PROPOSED PIPELINE (SERVICING OTHER WELLS)



ARROW PIPELINE, LLC

SKUNK CREEK #13-18-17-16H & #13-18-17-16H3

SECTION 18, T148N, R92W, 5th P.M.



Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP

09 14 11
 MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: S.F. REVISED: 03-01-12



Section Line
S89°56'25"W - 2635.50' (Meas.)

TEMP. ROAD RIGHT-OF-WAY DESCRIPTION

A 66' WIDE RIGHT-OF-WAY 33' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NE 1/4 SW 1/4 OF SECTION 24, T148N, R93W, 5th P.M., WHICH BEARS 88°23'02"E 1899.40' FROM THE WEST 1/4 CORNER OF SAID SECTION 24, THENCE N33°17'16"W 66.35' TO A POINT ON THE NORTH LINE OF THE SE 1/4 SW 1/4 OF SAID SECTION 24, WHICH BEARS N89°56'12"E 1862.24' FROM THE WEST 1/4 CORNER OF SAID SECTION 24, THENCE N33°17'16"W 178.91'; THENCE N45°57'12"W 132.62'; THENCE N79°34'01"W 142.25'; THENCE S58°46'47"W 190.82'; THENCE S58°39'49"W 160.27'; THENCE S49°08'06"W 121.80'; THENCE S07°36'32"W 6.43' TO A POINT ON THE SOUTH LINE OF THE SW 1/4 NW 1/4 OF SAID SECTION 24, WHICH BEARS N89°56'12"E 1135.78' FROM THE WEST 1/4 CORNER OF SAID SECTION 24, THENCE S07°36'32"W 57.92' TO A POINT IN THE NW 1/4 SW 1/4 OF SAID SECTION 24, WHICH BEARS S87°09'01"E 1129.51' FROM THE WEST 1/4 CORNER OF SAID SECTION 24, THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 1.602 ACRES MORE OR LESS.

RIGHT-OF-WAY LENGTHS

PROPERTY OWNER	FEET	ACRES	RODS
T1112A	124.27	0.188	7.53
T1004A	933.10	1.414	56.55
TOTAL	1057.37	1.602	64.08

ARROW PIPELINE, LLC
TEMPORARY ROAD
RIGHT-OF-WAY
ON TRIBAL LANDS
(FOR SKUNK CREEK
#13-18-17-16H &
#13-18-17-16H3)
LOCATED IN
SECTION 24, T148N, R93W, 5th P.M.,
DUNN COUNTY, NORTH DAKOTA

LINE	DIRECTION	LENGTH
L1	N33°17'16"W	66.35'
L2	N33°17'16"W	178.91'
L3	N45°57'12"W	132.62'
L4	N79°34'01"W	142.25'
L5	S58°46'47"W	190.82'
L6	S58°39'49"W	160.27'
L7	S49°08'06"W	121.80'
L8	S07°36'32"W	6.43'
L9	S07°36'32"W	57.92'

N00°03'13"W - 2635.50' (Meas.)

1/16 Section Line

NW 1/4

1/16 Section Line

NE 1/4

BEGINNING OF TEMP. ROAD STA. 0+00 BEARS S88°23'02"E 1899.40' FROM THE WEST 1/4 CORNER OF SECTION 24, T148N, R93W, 5th P.M.
P.O.P.L. 0+46.35 BEARS N89°56'12"E 1862.24' FROM THE WEST 1/4 CORNER OF SECTION 24, T148N, R93W, 5th P.M.
P.O.P.L. 9+99.45 BEARS N89°56'12"E 1135.78' FROM THE WEST 1/4 CORNER OF SECTION 24, T148N, R93W, 5th P.M.
END OF TEMP. ROAD STA. 10+57.37 BEARS S87°09'01"E 1129.51' FROM THE WEST 1/4 CORNER OF SECTION 24, T148N, R93W, 5th P.M.

T1004A

Proposed Pipeline for
Skunk Creek, 15H &
#13-18-17-16H3

T1004A

1/4 Section Line

Sec. 24

SE 1/4

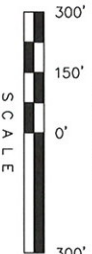
END OF PROPOSED
TEMP. ROAD RIGHT-OF-WAY
STA. 10+57.37
(At Proposed Pipeline)
T1112A

BEGINNING OF PROPOSED
TEMP. ROAD RIGHT-OF-WAY
STA. 0+00
(At Proposed Pipeline)
T1112A

N00°04'44"W
2633.89' (Meas.)
SW 1/4
T1112A

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

▲ = SECTION CORNERS LOCATED.
BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



GRID NORTH



CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



REGISTERED LAND SURVEYOR
STATE OF NORTH DAKOTA

UTAH ENGINEERING & LAND SURVEYING
85 SOUTH • 200 EAST • (435) 789-1017
VERNAL, UTAH - 84078

SCALE	DATE
1" = 300'	10-26-11
PARTY	REFERENCES
A.K. S.B.	G.L.O. PLAT
WEATHER	FILE
COLD	5 1 2 0 8

ARROW PIPELINE, LLC
SKUNK CREEK #13-18-17-16H & #13-18-17-16H3
TEMPORARY ROAD RIGHT-OF-WAY
SECTION 24, T148N, R93W, 5th P.M.

TOTAL TEMPORARY ROAD RIGHT-OF-WAY ON TRIBAL LANDS

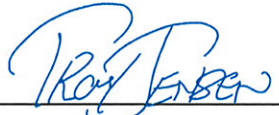
TOTAL LENGTH OF RIGHT-OF-WAY IS 1057.37' OR 0.200 MILES. WIDTH OF RIGHT-OF-WAY IS 66' (33' PERPENDICULAR ON EACH SIDE OF THE CENTERLINE). CONTAINS 1.602 ACRES MORE OR LESS.

ENGINEER'S AFFIDAVIT

STATE OF MONTANA }
COUNTY OF RICHLAND } SS

TROY JENSEN, BEING FIRST DULY SWORN DEPOSES AND STATES THAT HE IS THE REGISTERED LAND SURVEYOR, FOR ARROW PIPELINE, LLC, THAT THESE SURVEYS WERE MADE BY HIM (OR UNDER HIS SUPERVISION): THAT HE HAS EXAMINED THE FIELD NOTES OF THE SURVEYS OF THE TEMPORARY ROAD RIGHT-OF-WAY AS DESCRIBED AND SHOWN ON THIS MAP, THAT THIS MAP WAS PREPARED UNDER HIS DIRECTION FROM SAID FIELD NOTES; AND THAT SAID RIGHT-OF-WAY, 0.200 MILES IN LENGTH BEGINNING AND ENDING AS SHOWN ON THIS MAP IS ACCURATELY REPRESENTED.




REGISTERED LAND SURVEYOR
REGISTRATION NO. 4654
STATE OF NORTH DAKOTA

APPLICANT'S CERTIFICATE

I, JOHN M. DOLAN, DO HEREBY CERTIFY THAT I AM THE V.P. OF ENGINEERING FOR ARROW PIPELINE, LLC, HEREINAFTER DESIGNATED THE APPLICANT; THAT TROY JENSEN WHO SUBSCRIBED TO THE FOREGOING AFFIDAVIT, IS EMPLOYED BY THE APPLICANT AS A LAND SURVEYOR AND THAT HE WAS DIRECTED BY THE APPLICANT TO SURVEY THE LOCATION OF THIS TEMPORARY ROAD RIGHT-OF-WAY, 0.200 MILES IN LENGTH BEGINNING AT STA. 0+00 AND ENDING AT STA. 10+57.37, THAT SAID TEMPORARY ROAD RIGHT-OF-WAY IS ACCURATELY REPRESENTED ON THIS MAP; THAT SUCH SURVEY AS REPRESENTED ON THIS MAP HAS BEEN ADOPTED BY THE APPLICANT AS THE DEFINITE LOCATION OF THE RIGHT-OF-WAY THEREBY SHOWN; AND THAT THE MAP HAS BEEN PREPARED TO BE FILED WITH THE SECRETARY OF THE INTERIOR OR HIS DULY AUTHORIZED REPRESENTATIVE AS PART OF THE APPLICATION FOR SAID RIGHT-OF-WAY TO BE GRANTED THE APPLICANT, ITS SUCCESSORS AND ASSIGNS, WITH THE RIGHT TO CONSTRUCT, MAINTAIN, AND REPAIR IMPROVEMENTS, THEREON AND THEREOVER, FOR SUCH PURPOSES, AND WITH THE FURTHER RIGHT IN THE APPLICANT, ITS SUCCESSORS AND ASSIGNS TO TRANSFER THIS RIGHT-OF-WAY BY ASSIGNMENT, GRANT, OR OTHERWISE.

APPLICANT

V.P. OF ENGINEERING
TITLE